Case 7637

Lipoma of the corpus callosum: MRI findings
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Section: Neuroradiology
Case Type: Clinical Cases
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Patient: 13 years, female

Clinical History:
A 13 years old girl, child of foreign immigrants, with congenital tetraplegia and mental retardation presented with weight loss. She underwent US and CT examination of the abdomen and finally MRI of the brain.

Imaging Findings:
The main finding on the MRI is a homogeneous mass of signal intensity consistent with fat in the region of a hypoplastic corpus callosum. The fatty mass extends to the right of the midline into the right frontal lobe. It is demonstrated with high signal intensity on T1 and FLAIR images and low signal intensity on T1 fat saturation image.

Discussion:
CNS lipoma is an uncommon congenital lesion and appears in 1/1700 individuals. Its most frequent location is the genu of the corpus callosum, tuber cinereum, and quadrigeminal plate cistern. The optic chiasm, interpeduncular cistern, sylvian fissure and cerebellopontine angle are less common locations.

CNS lipoma has the classic appearance of a discrete fatty mass. It often (especially when located within the corpus callosum) has a calcified rim, which can form a “bracket sign” on frontal radiographs, and this appearance is pathognomonic. It has very low attenuation on CT, is homogeneously high in signal on T1-weighted MR images, hypointense on standard T2-WI and demonstrates no enhancement.

Corpus callosum lipoma is sometimes associated with interhemispheric lipoma and anomalies of the corpus callosum, such as callosal dysgenesis. In callosal dysgenesis there is often cortical maldevelopment (heterotopias, schizencephaly). Thus, such patients may present with seizures and developmental delay.

Most of the patients with corpus callosum lipoma are asymptomatic at the time of discovery. Rarely, it is associated with seizures (in cases of association with callosal dysgenesis and cortical dysplasia), as mentioned above.

The differential diagnosis includes dermoid (more heterogeneous signal), teratoma, lipomatous transformation of neoplasm, ossified falx and subacute haemorrhage (haemorrhage does not suppress in fat-saturation).

Corpus callosum lipomas are stable and most of them do not require treatment. Therefore, imaging follow-up is not required.

Differential Diagnosis List: Lipoma of the corpus callosum

Final Diagnosis: Lipoma of the corpus callosum
References:


**Description:** The callosal mass with high signal intensity and extension into the right frontal lobe

**Origin:**
Description: A high signal intensity homogeneous mass in the region of the corpus callosum is demonstrated, consistent with fat.

Origin:
Description: The same mass with low signal intensity Origin: